



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

July 16, 2014

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

DOT-SP 14661
(FIFTH REVISION)

EXPIRATION DATE: May 31, 2018

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: FIBA Technologies, Inc
Millbury, MA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain Division 2.1 and 2.2 materials in DOT Specification 3A, 3AA, 3AX, 3AAX and 3T cylinders having a water capacity over 125 lbs. that are periodically requalified every ten years rather than every five years. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
 - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 180.209(a) and part of § 180.209 (b), in that cylinders with water capacity over 125 lbs. may be requalified every ten years and they are not required to be removed from bundles and hammer tested prior to each refill; and § 180.209(b) (1)(iv) in that

acoustic emission and ultrasonic examination (AE/UE) is authorized in lieu of hydrostatic testing and visual inspection.

NOTE: This does not relieve the holder of this special permit from securing an approval for retesting cylinders from the Associate Administrator for Hazardous Materials Safety.

5. BASIS: This special permit is based on the application of FIBA Technologies, Inc dated March 13, 2013, submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
1,1-Difluoroethylene or Refrigerant gas R 1132a	2.1	UN1959	N/A
1-Chloro-1,1-difluoroethane or Refrigerant gas R 142b	2.1	UN2517	N/A
Air, compressed	2.2	UN1002	N/A
Argon, compressed	2.2	UN1006	N/A
Chlorodifluoromethane or Refrigerant gas R 22	2.2	UN1018	N/A
Ethylene, compressed	2.1	UN1962	N/A
Helium, compressed	2.2	UN1046	N/A
Hexafluoroethane, compressed or Refrigerant gas R 116	2.2	UN2193	N/A
Hydrogen, compressed	2.1	UN1049	N/A
Neon, compressed	2.2	UN1065	N/A

July 16, 2014

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Nitrogen trifluoride, compressed	2.2	UN2451	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Nitrous oxide	2.2	UN1070	N/A
Oxygen, compressed	2.2	UN1072	N/A
Silane, compressed	2.1	UN2203	N/A
Sulfur hexafluoride	2.2	UN1080	N/A
Tetrafluoromethane, compressed or Refrigerant gas R 14	2.2	UN1982	N/A
Trifluoromethane or Refrigerant gas R 23	2.2	UN1984	N/A
Compressed gas, n.o.s. (mixture of Air, Argon, R22, Helium, R116, Neon, Nitrogen trifluoride, Nitrogen, Nitrous oxide, Oxygen, Sulfur hexafluoride, R14, and/or R23)	2.2	UN1956	N/A
Compressed gas, flammable, n.o.s. (mixture of R 1132a, R142b, Air, Argon, R22, Ethylene, Helium, R116, Hydrogen, Neon, Nitrogen trifluoride, Nitrogen, Nitrous oxide, Oxygen, Silane, Sulfur hexafluoride, R14, and/or R23)	2.1	UN1954	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING - Packaging prescribed are DOT 3A, 3AA, 3AX, 3AAX and 3T cylinders (tubes), that are subjected to periodic requalification and marking specified in §§ 180.205, 180.209, and 180.213 except that:

July 16, 2014

(1) Each tube must be retested at least once every 10 years by utilizing the acoustic emission and ultrasonic examination (AE/UE) procedures specified in DOT-SP 9847 (FIBA Technologies, Inc.) except the maximum acceptance flaw size is 10% of the minimum design wall thickness of the cylinder (tube). The 10 year requalification period applies only to cylinders that meet all requirements specified in § 180.209(b) except that the cylinders may have a water capacity over 125 lbs and they are not hammer tested.

(2) Tubes with an outside diameter (OD) less than 18 inches must be mounted with adequate spacing between each tube. The minimum required vertical spacing between each tube must be such that it will allow UE follow-up transducer assembly (wedge) scans of the OD of all tubes in 90° quadrants.

(3) Every five years, each cylinder including the cylinders neck and flange/sleeve must be subjected to an external visual inspection (without disassembly) in accordance with CGA Pamphlet C-6. A cylinder with excessive corrosion around the neck or under the flange/sleeve must be removed and examined in accordance with CGA Pamphlet C-23. FIBA must record the results of the visual inspection of each cylinder and submit the report to the Office of Hazardous Materials Special Permits and Approval (OHMSPA) upon request.

b. OPERATIONAL CONTROLS -

(1) This special permit is limited to the DOT cylinders described in paragraph 7.a. above. Flat bottom cylinders are not covered by this permit.

(2) Prior to use, the external neck threads and flange/sleeve of each tube with a diameter greater than or equal to 18" and mounted on tube trailers or modules must be inspected in accordance with CGA Pamphlet C-23. This inspection must be periodically repeated at least once every ten years.

(3) Each DOT 3T cylinder, must be subjected to shear wave ultrasonic examination (UE). The UE must be performed by an authorized DOT UE special permit holder

July 16, 2014

or the cylinder (tube) manufacturer. The maximum acceptance defect (pitting corrosion, crack) for a tube that is tested by UE shear wave is 5% of the minimum design wall thickness of the tube. The UE shear wave must cover 100% of the sidewall of the cylinder.

(4) Maximum cycling (number of fillings) in a 10 year period must be less than or equal to 600 for DOT 3A, 3AA, 3AX, 3AAX and 300 for DOT 3T cylinders. FIBA must record all fillings of each cylinder and submit the report to OHMSPA upon request.

(5) The maximum acceptance flaw size for the DOT 3T specification cylinder used for silane service and requalified under this special permit using AE/UE must be 10% of the minimum design wall thickness of the cylinder (tube).

(6) All gases and gas mixture must have a dew point at or below minus 52°F at one atmosphere.

(7) Carbon dioxide or corrosive gas in any concentration cannot be added to cylinders.

(8) Hydrogen or hydrogen bearing gases are not authorized in DOT Specification 3T cylinders.

(9) No person may perform inspection and testing of cylinders subject to this special permit unless:

(i) That person is an employee of FIBA and has a current copy of this special permit at the location of such inspection and testing, and

(ii) Complies with all the terms and conditions of this special permit.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

c. MARKING:

(1) An exterior tube on each side of the bundle or ISO frame must be marked with letters and numbers at least 2 inches high on a contrasting background "DOT-SP 14661".

(2) The current retest date must be marked on the rear or side of the frame or the tube trailer at approximately eye level. In the event retest dates of cylinders differ in the frame or the tube trailer, the oldest retest date (meaning the date of the retest that must occur first) will be displayed.

(3) Cylinders shipped individually (DOT-3AA ton cylinder). Each cylinder must be plainly and durably marked "DOT-SP 14661" near the existing DOT markings.

d. Transportation of Division 2.1 (flammable gases) is not authorized aboard a cargo vessel unless specifically authorized in the Hazardous Materials Table (§ 172.101).

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, cargo vessel and rail freight.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or motor vehicle used to transport packages covered by this special permit.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

July 16, 2014

- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

July 16, 2014

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: MMTOUGHIRY/dl